

## **REMARKS**

In the Office Action mailed September 5, 2007, the Examiner rejected claim 19 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Examiner also rejected claim 19 under 35 U.S.C. §102(b) as being anticipated by Lisboa et al. Claims 1 and 9 were objected to as being indefinite. Furthermore, the specification and drawings were objected to. Claims 1-18 were found to be allowable if amended to overcome the objections to claims 1 and 9. Applicants would like to thank the Examiner for the indication of allowable subject matter. Claims 1, 9, 14, and 19 have been amended. For the reasons given below, Applicants respectfully submit that the reference fails to disclose, teach, or even suggest the presently claimed invention, and request that the rejection of the claims be withdrawn.

### **Objection to the Specification**

The Examiner objected to the arrangement of the specification as well as the title of the invention. The specification has been amended to include the appropriate headings, and the title has been amended to more clearly describe the claimed invention. Thus, the objection should be withdrawn.

### **Objection to the Drawings**

The Examiner objected to the drawings for failing to show every feature of the claims, as well as for including non-English characters. Substitute drawings are being submitted herewith,

including new Figure 6. Figure 6 shows the features recited in the original disclosure and claims, and thus contains no new matter. Therefore, the objection to the drawings should be withdrawn.

### **Claim Objections**

Claims 1 and 9 were objected to because the Examiner submitted that the phrase “such a way that the extent to which” rendered the claims indefinite. Applicants have amended the claims to delete this language, and thus the rejection should be withdrawn.

### **Rejection under 35 U.S.C. §101**

The Examiner rejected claim 19 as being directed to a data record per se, which is non-statutory subject matter. Applicants have amended the claim to recite a computer-readable medium that includes components that permit the data record’s functionality to be realized, which is statutory subject matter under MPEP §2106.01. Thus, the rejection should be withdrawn.

### **Rejection under 35 U.S.C §102**

The present application analyzes an electromagnetic spectrum generated by a measurement of an unknown sample. Using a multivariable analytical method, a sample parameter that can be allocated to a data record is determined. The data record is calculated by interpolation between at least one portion of first data and at least one portion of second data, the first and second data each being allocated to a first class and a second class. The method of the

present application takes into account the continuous course of a disease, and thus permits analysis of spectra within an intersection of data records.

The Examiner rejected claim 19 as being anticipated by Lisboa. According to MPEP §2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In this case, *Lisboa* fails to disclose interpolation between at least one portion of first data and at least one portion of second data, as recited in the claim.

According to the Office Action, Lisboa describes a data record that is calculated by interpolation between at least one part of first data and at least one part of second data. (Office Action, page 5). However, Applicants submit that Lisboa fails to disclose interpolation between two sets of data. A disease can be diagnosed by Lisboa only with respect to different classes without being able to take into account data within the above mentioned intersection. Moreover, Lisboa does not disclose that the sample parameter is compared with a data set generated by interpolation.

Furthermore, the Examiner contends that the "ROC characteristics" mentioned in Lisboa are described as the first and the second parameter. (Office Action, p. 5). Applicants submit that "ROC characteristics" is not a well defined term and is not quantifiable, which is a prerequisite for interpolation.

Even if one could consider the "ROC characteristics" as a quantifiable size, as e.g., in the form of the area under the ROC curve ("Area Under Curve" (AUC)), which it is not, the present application deals with sizes that serve directly as markers or surrogate-markers. In contrast, the AUC would merely determine the quality of a marker and deals with another level of data

analysis. In other words, while the present application uses the interpolation between spectra of extreme health situations (e.g, end-stage cancer vs. healthy) as a marker, the AUC serves as a measure for the quality of an existing marker. Thus, the rejection is improper and should be withdrawn.

## **Conclusion**

In view of the foregoing, Applicants respectfully request that all of the rejections of the pending claims be withdrawn. Applicants hereby earnestly solicit an early Notice of Allowance. If for any reason, the application is not considered to be in condition for allowance on the next Office Action and an interview would be helpful to resolve any remaining issues, the Examiner is requested to contact the undersigned at (312) 913-3334.

Respectfully submitted,

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